

### **DETAILED ACTION**

1. This office action is responsive to the communication on February 23, 2011; claims 1, 3-5, 9-13, 18, 21-29 are pending; claims 12-13, 18 are withdrawn from consideration as being drawn to non-elected invention. Claims 1, 3-5, 7, 9-11, 21-29 are considered in this office action.

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on February 23, 2011 has been entered.

3. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: the specification disclosure fails to provide a proper antecedent basis for the term " photoreactive crosslinking component" in claims 1 and 29.

### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 1, 3-5, 7, 9-11, 21-29 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the

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claimed invention. The specification disclosure fail to provide support for “photoreactive crosslinking component able to undergo a reversible reaction upon simulation with ultraviolet light” in claim 1 and “photoreactive crosslinking component able to undergo a reversible reaction upon simulation with ultraviolet light , wherein the photoreactive component is selected from the group consisting of a cinnamic acid ester compound, a cinnamyl acid ester compound, cinnamylacyl acid, ortho-substituted cinnamic acids, cinnamyloxysilanes, and 1,3-diphenyl-2-propene-1-one, 4- methylcoumarin”. The specification disclosure on page 5, lines 20-33 discloses “crosslinking agent” comprises “a component responsible for the crosslinking of the matrix” and page 6, lines 10-30, discloses “photoreactive component” is photoreactive group unit, able to undergo a reversible reaction with (a second group photoreactive group) by means of simulation of suitable light irradiation, preferably, UV irradiation. The specification disclosure does not discloses the "photoreactive component" as "photoreactive crosslinking component".

6. Claims 1, 3-5, 7, 9-11, 21-28 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the photoreactive component is selected from the group consisting of a cinnamic acid ester compound, a cinnamyl acid ester compound, cinnamylacyl acid, ortho-substituted cinnamic acids, cinnamyloxysilanes, and 1,3-diphenyl-2-propene-1-one, 4- methylcoumarin" does not reasonably provide enablement for the scope of “ a photoreactive crosslinking component able to undergo a reversible reaction upon stimulation with ultraviolet light ". The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims. The specification disclosure fails to provide a guidance as how to

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select a component both having crosslinking property and able to undergo a reversible reaction upon stimulation with ultraviolet light.

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 1, 3-5, 7, 9-11, 21-29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is unclear in view of the specification disclosure on page 5, lines 20-33 discloses "crosslinking agent" comprises "a component responsible for the crosslinking of the matrix" and page 6, lines 10-30, discloses "photoreactive component" is photoreactive group unit, able to undergo a reversible reaction with (a second group photoreactive group) by means of simulation of suitable light irradiation, preferably, UV irradiation. The specification disclosure does not disclose the "photoreactive component" as "photoreactive crosslinking component". Thus, it is unclear it intend to claim the "photoreactive component" and "photoreactive crosslinking component" of otherwise. The terminology used in the claims is not consistent with the terminology presented in the specification disclosure. "Otherwise definite claims may be help indefinite in light of the specification, where the specification confuses or distorts the commonly accepted meaning of a term or phrase. In re Anderson 176 USPQ 331 (CCPA 1973); In re Cohen 169 USPQ 45 (CCPA 1971); In re Hammack 166 USPQ 204 (CCPA 1970); In re Hill 73 USPQ 263 (CCPA 1947).

Claims 3-4, 9 are unclear with respect to the antecedent basis for "the photoreactive component". The previous term used is "a photoreactive crosslinking agent". Claim 5, 28 is

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unclear whether the scope of protection sought for "photoreactive component" is within the meaning of "photoreactive crosslinking agent" or otherwise. Claim 10 is unclear. The preamble is related to "The process of preparing polymeric network of claim 1", but the reactive set forth in the claims is outside the scope of reactive presented in claim 1.

Claim 29 is unclear. See the language "photoreactive crosslinking component" and "wherein the photoreactive component". The antecedent basis for "photoactive component" is unclear since the previous term used is "photoreactive crosslinking component". The "anda photoreactive crosslinking component" should be "and a photoreactive crosslinking component".

9. Claims 1, 3-5, 7, 9-11, 21-28 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. the photoreactive component set forth on page 6, (3) is critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). The "photoreactive crosslinking component" is part of the polymeric network responsible for crosslinking of the matrix, and is not be able to undergo a reversible reaction upon stimulation with ultraviolet light.

### ***Response to Arguments***

10. Applicant's arguments filed February 23, 2011 have been fully considered but they are not persuasive because of the reason set forth above. The specification disclosure on page 5, lines 20-33 discloses "crosslinking agent" comprises "a component responsible for the crosslinking of the matrix" and page 6, lines 10-30, discloses "photoreactive component" is photoreactive group unit, able to undergo a reversible reaction with (a second group photoreactive group) by means of simulation of suitable light irradiation, preferably, UV

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irradiation. The specification disclosure does not disclose the "photoreactive component" as "photoreactive crosslinking component. The preparation of the network shown on page 14 contains n-butylacrylate, a cinnamic acid ester and poly(propylene propylene glycol)dimethacrylate. Thus, it contains a matrix component, a photoreactive component (cinnamic acid ester) and crosslinking agent (poly(propylene propylene glycol)dimethacrylate). The crosslinking reaction is not related to the exposure to uv light.

### ***Conclusion***

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to THORL CHEA whose telephone number is (571)272-1328. The examiner can normally be reached on 9 AM-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark F. Huff can be reached on (571)272-1385. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/Thorl Chea/

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Primary Examiner, Art Unit 1721